MILLER CANFIELD

MEMORANDUM

TO: Michigan Department of Environmental Quality

FROM: Thomas C. Phillips and Shoshie Levine

FILE NO.: 018544-00055

RE: Bay Harbor - alternative approaches to surface water discharge

DATE: September 18, 2009

I. INTRODUCTION

CMS is seeking approval of a lawful surface water discharge of leachate that is collected and treated at the Little Traverse Bay Cement Kiln Dust Site, which is commonly known as Bay Harbor. There is a compelling basis to authorize a surface water discharge given factors that include but are not limited to: the volume of leachate collected; the greater certainty and control over a direct surface water discharge at Bay Harbor in comparison to relying on agreements with third parties for disposal; the all-weather operational capacity of a surface water discharge; as well as the community opposition to and environmental tradeoffs from trucking leachate for disposal at an off-site location.

The cost of current disposal options is also a particularly compelling reason to authorize a surface water discharge, and is legitimately considered in a cleanup of this scope and duration. Currently, CMS spends roughly $0.10 per gallon to dispose of roughly 180,000 gallons of leachate per day, or more, for a cost of more than $6.5 million per year. If CMS were to have a surface water discharge authorized for the treated leachate, its costs would drop to roughly $0.01 per gallon of leachate at East Park and $0.05 per gallon of leachate at the Development. CMS estimates that it will spend around $3 million per year for a surface water discharge, while obtaining other benefits associated with dramatically decreased trucking. Those anticipated savings are even more dramatic when calculated over the long-term horizon for collecting leachate at Bay Harbor and if the volume of water to be collected increases due to weather events.

CMS has identified approaches to authorizing this critically-needed surface water discharge pursuant to a permit under the National Pollutant Discharge Elimination System

(NPDES).[1] This memorandum outlines those approaches and provides basic information regarding them for further discussion. Other approaches may be viable as well, and CMS is open to discussing them with regulators.

In considering the available options for a surface water discharge, CMS assumes it will implement the best available economically feasible treatment technology that is reasonable to treat the leachate in the way that maximizes mercury removal before discharge. CMS also assumes that it will be eligible for standard permitting flexibility as may be necessary, such as mixing zones for eligible leachate constituents. Dilution may or may not be used to reduce mercury concentrations below the level to which it can be treated, depending on the efficacy of treatment technology for one or more streams of collected leachate and whether site sources of dilution water can achieve the surface water criterion for mercury. Accordingly, this discussion addresses the bases on which CMS believes a mercury variance can be granted by the Michigan Department of Environmental Quality (MDEQ) without objection by the United States Environmental Protection Agency (EPA).

II. TIMING OF NPDES PERMIT

CMS would apply to MDEQ for a permit under the National Pollutant Discharge Elimination System (NPDES) concurrently with the EPA-led removal action. The NPDES permit issued by MDEQ would therefore authorize a discharge both in the short-term and long-term at Bay Harbor and would be integrated into the final remedy that will be the subject of an agreement with MDEQ.

According to CMS's research, EPA and MDEQ may not "require" CMS to apply for an NPDES permit to authorize an on-site surface water discharge at Bay Harbor while a removal action is ongoing. As the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC 9621(e)(1), states, "No Federal, State, or local permit *shall be required* for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section." Emphasis added. The regulations implementing the NPDES program under Clean Water Act include a reciprocal provision stating, "No federal, state, or local permits are required for on-site response actions conducted pursuant to CERCLA sections 104, 106, 120, 121, or 122." 40 CFR 300.400(e)(1). The Administrative Order on Consent for Removal Action (AOC) into which CMS entered in 2005 relied on authority that included section 106 of CERCLA, 42 USC 9606, and therefore brings the Bay Harbor cleanup within the scope of this prohibition against *requiring* a permit for this on-site activity. However, CMS has not yet found any legal prohibition against voluntarily applying for an NPDES permit during a removal action. An NPDES permit is a reasonable mechanism for the safe and lawful disposal of treated leachate at Bay Harbor.

Issuing an NPDES permit before the current removal action ends is warranted under the unusual circumstances surrounding Bay Harbor. Even before EPA and CMS executed the AOC for the removal action in February 2005, EPA, CMS, and MDEQ had negotiated a division of agency oversight for response activities to be taken at Bay Harbor. The parties agreed that EPA

[1] For simplicity's sake, this memorandum refers to a single NPDES permit. However, CMS may apply for separate NPDES permits for East Park and the Development due to the differences in the leachate and the treatment/dilution processes at those locations.

would be the lead agency over the removal action, which would focus on abating the threat associated with high pH in the surface water. MDEQ, however, would take the lead over the long-term remedies to be negotiated with CMS. The removal action AOC included a method of transferring this project oversight from EPA to MDEQ in paragraph 15.x. An NPDES permit will facilitate that transition to MDEQ oversight and the final remedy by creating a long-term, technically and financially sustainable mechanism for disposing of the treated leachate that is integral to the final remedy. An NPDES permit is also consistent with the requirements for a surface water discharge in the removal action AOC, the Clean Water Act, and Michigan water quality standards, further justifying its issuance by MDEQ.

Issuing an NPDES at this time is also justified in light of the 2006 amendment to the removal action AOC. In 2006, EPA and CMS modified the AOC to permit the early transition to the long-term remedy at East Park (the East CKD Area) to occur before the removal action at the Bay Harbor Development (West CKD, Pine Court, Seep 1, Seep 2, and Village Harbor areas) was complete. East Park is geologically different from the Development and its removal action remedies are essentially complete at this time, awaiting only the startup of the diversion wells. The removal actions at the Development are also well on the way to completion. Thus, there is no project-related basis to delay permitting a surface water discharge.

III. LEGAL BASES FOR A VARIANCE

If MDEQ issues an NPDES permit for treated leachate from Bay Harbor, some leachate may be diluted to meet the 1.3 ppt water quality standard for mercury. However, on-site sources of dilution water may not be adequate to lower the concentrations of mercury for other sources of leachate at Bay Harbor to meet the 1.3 ppt standard. Thus, a variance for mercury is likely to be necessary to make surface water discharge the primary method of disposal for all the Bay Harbor leachate even after it is treated and diluted.

Rule 323.1103 provides MDEQ a lawful mechanism for granting a variance from state water quality standards. This variance rule is, itself, part of the rules that establish state water quality standards. Thus a variance in an NPDES permit issued in compliance with Rule 323.1103 will satisfy paragraph 15.x of the AOC to the extent that the reference to preventing "unacceptable exposures to surface waters . . . impacted by CKD waste materials" might be read by some to require a surface water discharge to meet applicable water quality standards. In other words, state law permits NPDES permits to be issued with water quality standard variances and an NPDES permit issued with a variance is as lawful as any other NPDES permit. Further, the state water quality standards including this variance rule were reviewed and approved by EPA prior to their implementation, indicating that EPA should have no basis to object to a variance issued consistently with Rule 323.1103 and other applicable rules.

Under Rule 323.1103, MDEQ has the authority to issue a variance in an NPDES permit from "any water quality standard (WQS) that is the basis of a water quality-based effluent limitation . . . " Rule 323.1103(1). A variance may not apply to "new dischargers unless the proposed discharge is necessary to alleviate an imminent and substantial danger to the public health or welfare." Rule 323.1103(1)(b). Thus, Rule 323.1103 sets forth at least two bases on which MDEQ can grant CMS a variance in an NPDES permit: (a) the Bay Harbor leachate is an existing "discharge" and eligible for an individual variance or relief under MDEQ's multiple

discharger variance for mercury; and (b) even if the Bay Harbor leachate is a "new discharge," it is necessary to abate a "substantial and imminent danger to the public health or welfare."

A. The Treated Leachate Is Not A "New Discharge"

MDEQ has a factual basis on which to conclude that the leachate is not a "new discharge" and, therefore, eligible for a variance. Supporting factors include but are not limited to:

- The leachate has been classified as a "venting discharge" within the meaning of MCL 324.3109a(3)(b), MCL 324.20120a(15), a variety of Part 201 rules for decades.
- The AOC characterizes the venting groundwater/leachate that is collected and treated as a "discharge" in paragraph 9.g.
- Even before the current removal action, the leachate was collected at Bay Harbor, piped to the City of Petoskey wastewater treatment plant (WWTP), and discharged through a point source to Lake Michigan.
- During this removal action the leachate has been collected at Bay Harbor, trucked to the Grand Traverse County WWTP, and discharged to Lake Michigan through a point source.
- The source of the leachate (on-site CKD) has not changed for decades and is not the product of new polluting activities, but remnants of historical contamination that has only decreased over time due to CMS's response activities.
- The composition of the leachate and the manner in which it is created has not changed significantly over time.
- Infrastructure constructed more than a decade ago remains involved in the current collection of leachate, indicating continuity between this proposed surface water discharge and the previous point source discharges of the leachate.

All these and other factors suggest that Bay Harbor leachate has been discharged to Lake Michigan, which would be the receiving water for any NPDES permit, for many years. Therefore, the leachate must be considered an existing discharge to Lake Michigan and eligible for a variance in an NPDES permit that would authorize that same discharge to occur at Bay Harbor.

Further, the variance rule is intended to apply new municipal and industry surface water discharges where the permit applicant has control over influent quality, can require pre-treatment from upstream dischargers, or can shut off the discharge when necessary. The Michigan water quality standards explicitly distinguish between those controllable discharges and those associated with legacy contamination. For instance:

- Rule 323.1103(2)(c) expressly allows MDEQ to issue a variance if "[h]uman-caused conditions or sources of pollution prevent the attainment of the WQS and cannot be remedied or more environmental damage would occur in correcting the conditions or

sources of pollution than would occur by leaving the conditions or sources in place." This rule recognizes MDEQ's authority to authorize a surface water discharge given the difficult realities of cleaning historical pollution.

- Rule 323.1041 states in relevant part, "Where surface waters of the state may have been degraded due to past human activities and attainment of standards in the near future is not economically or technically achievable, these standards shall be used to improve water quality." Issuing an NPDES permit that would allow CMS to reduce the mass and concentration of mercury that would otherwise be discharged to Lake Michigan when it is not technically achievable or economically feasible to comply with the 1.3 ppt standard for mercury is therefore consistent with the purpose of the water quality standards as a whole.

- The ordinary objection to granting a variance from an established water quality standard is that it leads to the non-attainment or further degradation of water quality. However, the anti-degradation rule, Rule 323.1098(8), expressly concludes that a surface water discharge (except to an outstanding state resource water) that is part of response activities undertaken under CERCLA, Part 201, and other statutes do "not constitute the lowering of water quality." See Rule 323.1098(8)(c)(i) and (ii). Therefore, this potential objection to a variance in an NPDES permit for the Bay Harbor leachate is fully answered and rejected by the anti-degradation rule.

These provisions (and others) recognize that surface water discharges associated with cleanups should be treated more flexibly than other discharges. See, e.g., MCL 324.3109a. That flexibility is consistent with the way existing discharges are treated under the variance rule. Thus, the Bay Harbor leachate should eligible for an NPDES variance for mercury like other existing discharges.

B. The Leachate Discharge Is Required to Alleviate An Imminent and Substantial Danger

Even if there were a basis to conclude that the Bay Harbor leachate were a new discharge, it would nevertheless be eligible for a variance of the water quality standard for mercury because the discharge is "necessary to alleviate an imminent and substantial danger to the public health or welfare." Rule 323.1103(1)(b). Notably, while the variance applies on a standard by standard basis, the variance rule looks at the need for the discharge as a whole with all its constituents.

In the case of the Bay Harbor leachate, the AOC itself recognizes that the pH associated with the leachate presents a substantial and imminent endangerment to public health and welfare. As paragraph 10.f stated in reference to paragraph 9.h, 9.i, and 9.k, "The conditions present at the Site constitute a threat to the public health, welfare, or the environment . . . ." The leachate that CMS collects and is proposing for a surface water discharge is directly addressing this threat to the public health from the high pH leachate, which threat is expected to continue absent collection of the leachate well into the future. The discharge as a whole is warranted to abate the continuing threat of high pH even with the other constituents like mercury being collected, especially because the discharge provides the incidental opportunity to reduce the concentration and mass of these constituents entering Lake Michigan.

IV. CONCLUSION

MDEQ has the authority to authorize a surface water discharge for treated leachate now. There are numerous compelling reasons to grant that authorization now. The failure to grant the surface water discharge has and will cause CMS to incur substantial additional costs on a daily basis. Those additional costs are not justified based on the substantial improvement to water quality already achieved by CMS at Bay Harbor and the further improvements to be achieved through the implementation of the best available and economically feasible treatment technology that could be used in a reasonable way to treat the leachate to maximizes mercury removal before discharge.

An NPDES permit is an essential component of authorizing the long-term treatment and on-site surface water discharge of leachate. While an NPDES permit is likely to require a mercury variance for the foreseeable future, issuing an NPDES permit with a variance is legally justifiable, environmentally sound under the circumstances, and technically and economically warranted methods for CMS to dispose of the leachate. Accordingly, CMS asks that the agencies come to agreement on issuing CMS an NPDES permit for Bay Harbor without further delay.

4894485.4\018544-00055